UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,129	01/20/2004	David S. F. Young	2056.028	4113

21917 7590 05/03/2007

MCHALE & SLAVIN, P.A.
2855 PGA BLVD
PALM BEACH GARDENS, FL 33410

EXAMINER	
REDDIG, PETER J	

ART UNIT	PAPER NUMBER
1642	

MAIL DATE	DELIVERY MODE
05/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/762,129	YOUNG ET AL.	
	Examiner	Art Unit	
	Peter J. Reddig	1642	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 February 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5 and 7-13* is/are pending in the application.

4a) Of the above claim(s) *4 and 9-13* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3, 5, 7, and 8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The Amendment filed February 16, 2007 in response to the Office Action of November 2, 2006 is acknowledged and has been entered. Claims 1-5 and 7-13 are currently pending. Previously pending claims 6, 15, and 16 have been cancelled, claims 1, 5, 7, and 8 have been amended. Claims 4 and 9-13 were previously withdrawn as being drawn to a non-elected invention.

2. Claims 1-3, 5, 7, and 8 are currently being examined.

3. The following rejections are being maintained:

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 8 remains rejected under 35 U.S.C. 112 for the reasons previously set forth on page 5, section 6 of the Office Action of November 2, 2006.

Applicant has amended claim 8 to the method of claim 1 wherein said antibody is a chimeric antibody produced from the isolated monoclonal antibody produced by the hybridoma deposited with the ATCC as accession number PTA-5643 and argues that the metes and bounds of the claim now specifically relate to chimeric antibodies produced from the isolated monoclonal antibody produced by the hybridoma deposited with the ATCC as accession number PTA-4890.

Applicant's arguments have been carefully considered, but have not been found persuasive and the rejection is maintained because the term chimeric, as previously set forth in the Office Action of November 2, 200, is generic to a class of antibodies which are

products of genetic shuffling of antibody domains and other active proteins. In the absence of a definition of the term "chimeric" in the specification, it cannot be determined to what the claims are drawn.

Thus the amended claim remains indefinite and the rejection is maintained.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-3, 5, 7, and 8 remain rejected under 35 U.S.C. 112 for the reasons previously set forth on pages 8-13, section 7 of the Office Action of November 2, 2006.

Applicant argues that with reference to the specification at page 10, lines 2-9, page 17, lines 8-22, the specification teaches use of body weight as a surrogate marker of disease progression in a xenograft model of ovarian cancer in SCID mice, and further goes on to indicate a reduction of tumor burden in both breast and ovarian tumors as a result of treatment with the instant PTA-5643 antibody. Applicant argues that it is improper to limit the claims to a specific exemplary embodiment. Applicant argues that the claims are drawn to treatment of a human tumor wherein the tumor expresses an antigen which specifically binds to the isolated monoclonal antibody produced by the hybridoma deposited with the ATCC as accession number PTA-5643. Applicant argues that the rejection on the basis of alleged failure to treat metastatic disease is not understood. Applicant argues that firstly, all cancers do not metastasize. Secondly, the demonstration that tumor burden is reduced or reversed by treatment with the claimed antibody, and that weight loss is prevented, is indicative of a delay in disease progression, and is evidence, in and of itself, of a delay in

disease progression. Applicant argues that a valid model could be easily developed for any cancer expressing such an antigen to codify reduction of body weight as a surrogate marker of disease progression.

Applicant's arguments have been carefully considered, but have not been found persuasive and the rejection is maintained.

In regard to Applicant's argument that it is improper to limit the claims to a specific exemplary embodiment, all questions of enablement are evaluated against the claimed subject matter and the focus of the examination inquiry is whether everything within the scope of the claim is enabled, see MPEP 2164.08 [R-2]. Thus, although exemplification is not required, the claims can be limited to those embodiments that are enabled.

As drawn to the rejection on the basis of metastatic disease, the Office determines the scope of claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction "in light of the specification as it would be interpreted by one of ordinary skill in the art", see MPEP 2111. Given that, as previously set forth in section 7, the art recognizes that cancer progression is defined as the tendency of tumors to become more malignant as they grow and malignancy is the essential property of cancer cells that is demonstrated by their ability to proliferate indefinitely, to invade surrounding tissue, and to metastasize to other organs (p. 399 Tannock, I. F. and Hill, H. P., The Basic Science of Oncology, 1992, previously cited on page 11 of the office action of November 2, 2006) and given that no limiting definition of disease progression is given in the specification, it is proper to assume for examination purposes that disease progression is the tendency of tumors to become more malignant as

they grow, i. e. metastatic. Although the specification teaches that PTA-5643 prevented body weight gain and hypothesizes that this indicates delayed disease progression, given that, as previously cited on page 12 of the office action of November 2, 2006, Hu et al. teaches assessment of body weight **and** abdominal circumference is an imprecise way to asses tumor burden **and** ascites volume, there is no indication in the specification or the art of record that measurement of body weight **alone** indicates disease progression, i. e. the development of metastatic disease. In other words, body weight indicate may only reflect the size of the primary tumor and not the development or inhibition of metatstatic tumors at distant sites. Although applicant argues that a valid model could be easily developed to codify body weight as a surrogate marker of disease progression, the development of such a model is not commensurate in scope with the claims and, furthermore, neither the specification nor the art of record teaches what would be required to develop such a model, thus undue experimentation would be required to make and use said model.

Thus, Applicants' arguments have not been found persuasive and the rejection is maintained.

6. Claims 1-3, 5, and 8 remain rejected under 35 U.S.C. 112 for the reasons previously set forth on pages 19-20, section 9 of the Office Action of November 2, 2006.

Applicant argues that numerous references exist in the literature regarding the utility of the murine monoclonal antibody (mAb) 4D5 for the treatment of human tumors, notably human breast cancers. Applicant argues that therefore, based on demonstrable success with mouse monoclonals against human tumors, it is reasonable to predict that non-humanized antibodies will be useful in the treatment of human tumors, particularly as

a HAMA response is certainly not immediate, and may, in fact, not occur to an extent which will negate the demonstrated utility of the mouse antibody.

Applicant's arguments have been carefully considered, but have not been found persuasive and the rejection is maintained.

The claims read on treating a human tumor in a mammal with a mouse monoclonal antibody PTA-5643. This means the claims read on, and the specification contemplates, the treatment of cancer in humans with antibodies produced in a mouse and one of skill in the art cannot predict the effect of the HAMA response on the effectiveness of PTA-5643 on extending survival and/or delaying disease progression. Although the applicant argues that numerous references exist in the literature for the treatment of human tumors, the one cited example the mouse mAb 4D5, has been humanized because of the problems caused by HAMA in order to produce an effective therapeutic and to minimize its immunogenicity for use in humans as described in the previously cited work of Baselga et al (J. Clin. Oncol, 1996, 14:737-744). Thus, the art does not support the use of mAb 4D5 for treatment of human tumors in humans without humanizing the antibody. Furthermore, although the HAMA response may not be immediate, the protocol for extending survival and delaying disease progression used in the specification teaches that the antibody is administer over several weeks with repeated administrations of the antibody, see Examples 1 and 2, thus one of skill in the art would expect that this protocol would predictably increase the probability of the HAMA response occurring due to the repeated exposure of the immune system to a foreign antigen. Thus the effectiveness of the claimed mouse

monoclonal antibody, PTA-5643, to extend survival and/or delay disease progression for a human tumor could not be predicted without undue experimentation.

Thus, Applicants' arguments have not been found persuasive and the rejection is maintained.

7. All other objections and rejections recited in Office Action of November 2, 2006 are withdrawn.

8. No claims allowed.

9. This action is a **final rejection** and is intended to close the prosecution of this application. Applicant's reply under 37 CFR 1.113 to this action is limited either to an appeal to the Board of Patent Appeals and Interferences or to an amendment complying with the requirements set forth below.

If applicant should desire to appeal any rejection made by the examiner, a Notice of Appeal must be filed within the period for reply identifying the rejected claim or claims appealed. The Notice of Appeal must be accompanied by the required appeal fee.

If applicant should desire to file an amendment, entry of a proposed amendment after final rejection cannot be made as a matter of right unless it merely cancels claims or complies with a formal requirement made earlier. Amendments touching the merits of the application which otherwise might not be proper may be admitted upon a showing a good and sufficient reasons why they are necessary and why they were not presented earlier.

A reply under 37 CFR 1.113 to a final rejection must include the appeal form, or cancellation of, each rejected claim. The filing of an amendment after final rejection, whether or not it is entered, does not stop the running of the statutory period for reply to

the final rejection unless the examiner holds the claims to be in condition for allowance. Accordingly, if a Notice of Appeal has not been filed properly within the period for reply, or any extension of this period obtained under either 37 CFR 1.136(a) or (b), the application will become abandoned.

10. Applicant's amendment necessitated the new grounds of rejection. Thus, **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. 1.136(a).

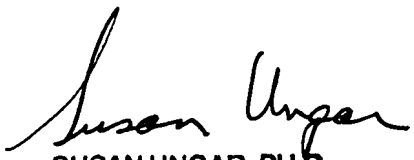
A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J. Reddig whose telephone number is (571) 272-9031. The examiner can normally be reached on M-F 8:30 a.m.-5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shanon Foley can be reached on (571) 272-0890. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



SUSAN UNGAR, PH.D
PRIMARY EXAMINER

Peter J. Reddig, Ph.D.
Examiner
Art Unit 1642

PJR